Digiwei

Farm: **"Lensink"**
Location: **AALTEN, THE NETHERLANDS**

Background

At the farm of Johnny and Rianne Lensink, 55 dairy cows are milked by a milking robot. Free cow traffic is applied on the farm and it is therefore difficult to determine the amount of grazing per cow per day. The Lensink family wants to prove that the cows are grazing in order to meet the criteria for obtaining a grazing premium. Dutch dairy companies offer a grazing premium of 1-2 cts per kg milk to farmers that practice grazing for at least 6 hours a day and for at least 120 days a year. More and more, it will be obliged by the milk processors, to really prove that the cows are graze during that time period. Therefore, the Lensink family is now experimenting with Digiwei. This is a Bluetooth system that measures the grazing hours for each individual cow. The farm has four receivers that register whether a cow is walking inside or outside the barn in the field.

Detailed description

The majority of the inhabitants of the Netherlands like to see cows outside the stables, because cows are part of the Dutch landscape. To stimulate farmers to let cows graze outside, they get an additional bonus on top of the normal price of a liter milk. To get this bonus,

cows must be outside in the field for at least 120 days per year and at least 6 hours per day. For farmers with cow-traffic that is managed by a milking robot, it is difficult to prove that cows were outside in the field for that specific time. This is why several companies developed systems that measures the time that the individual cow is outside in the meadows. The system of the Internet Huis (Digiwei) is based on a tag that's attached to the cow and receivers along the path where cows go to and from the meadows. (https://innovation-awards.nl/en-us/innovation/digiwei)

Figure 1. Set-up of Digiwei (https://www.iot-farm.nl/)

Results

The family Lensink tried the system. Based on the results thus far, they have mixed feelings. The system would be far more beneficial if they would be able to use the data from the system for their daily management as well.

Adoption criteria

This innovation will be useful in situations of doubt whether or not farmers meet the criteria of the grazing premium. A system like Digiwei will deliver the real data on the amount of grazing of each individual dairy cow.

Future prospects

This innovation will be used in a limited number of farms only, especially in situations with high grazing intensities and doubt whether or not the criteria for the grazing premium are met.

The prospects will increase if the data can be used in daily management as well. Research at Aeres University of Applied Sciences showed the following: After conducting interviews with dairy farmers it turned out, that there was a lot of demand to be able to do more with the digital measurement system, and farmers mentioned many possible opportunities. However, it also turned out that the users had very little experience with the digital measurement systems, so they could share little experience. An analysis of data obtained by 6 commercial farms with a digital measurement system showed that there were many differences between the farms, and the pasture system had a lot of influence on these differences. The variation in pasture times between the cows was also striking and could be promising in daily farm management.